



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/518,799	12/20/2004	Massimo Giacomelli	C&P-139US	3630
23122	7590	06/08/2006	EXAMINER	
RATNERPRESTIA P O BOX 980 VALLEY FORGE, PA 19482-0980			PRICE, CARL D	
			ART UNIT	PAPER NUMBER
			3749	

DATE MAILED: 06/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/518,799	GIACOMELLI ET AL.	
	Examiner	Art Unit	
	CARL D. PRICE	3749	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/20/2004</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED OFFICE ACTION

Information Disclosure Statement

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered. In particular, applicant lists "Italian Patent Application No. PD2000A000138, on page 1 of the specification.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim(s): Rejected under 35 U.S.C. 112, second paragraph

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1-14, the word "means" is preceded by the word(s) "valve", "sensor" and "power generating" in an attempt to use a "means" clause to recite a claim element as a means for performing a specified function. However, since no function is specified by the word(s) preceding "means," it is impossible to determine the equivalents of the element, as required by 35 U.S.C. 112, sixth paragraph. See *Ex parte Klumb*, 159 USPQ 694 (Bd. App. 1967). See also "thermopile means" (claim 2), "transducer means" and "comparison means" (claim 4), "

Claims **1-14** are vague and indefinite. For example, in claim 1, line 5, it is unclear what materials would necessarily constitute “or other dangerous substances”.

Claim 6 recites “the resistive part”. However, there is no antecedent basis for this term in the claim.

In claim 14, it is unclear what, if any, the “a control unit” has with regard to the already recited “a control unit” of claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim(s): Rejected under 35 U.S.C. 103(a)

Claims **1-14** are rejected under 35 U.S.C. 103(a) as being unpatentable over **US005816791 (Home)** in view of **US004638789 (Ueki et al)**.

US005816791 (Home) shows and disclose a combustible gas valve control unit including:

- a thermocouple controlled magnetic operated gas supply valve (31);
- an electronic circuit assembly including: -

Art Unit: 3749

- electric power generation unit including a battery (31; see column 2, lines 26-29 and column 3, lines 16-21) for supplying electricity to the electronic circuit assembly;
- an electronic type switch arranged to control power to the magnetic operated valve unit in response to a sensor signal (34).

US005816791 (Home) discloses the invention substantially as set forth in the claims with possible exception to:

- the sensor arranged to detect the presence of a dangerous substance);
and
- an electronic type switch arranged to control power to the magnetic operated valve unit in response to inflammable vapors detected by the sensor.

US004638789 (Ueki et al) teaches, from applicant's same combustion control field of endeavor, providing a combustion control with a sensor arranged to detect the presence of dangerous substances (e.g. – carbon monoxide) and an electronic type switch (22, 25; see figures 7-8) arranged to control power to the magnetic operated valve unit in response to inflammable vapors detected by the sensor. a thermocouple (8) controlled magnetic operated gas supply valve (10);

- an electronic circuit assembly including:
 - electric power generation unit including a battery (21) for supplying electricity to the electronic circuit assembly arranged in series (see figure 9) with an electronic type switch (22) arranged to control power to the magnetic operated valve unit (10, 10a) in response to the sensor signal (14);
 - the sensor arranged to detect the presence of a dangerous substance (carbon monoxide).

Art Unit: 3749

In regard to claims 1-14, for the purpose of providing means to detect the presence of a dangerous substance (carbon monoxide), it would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the combustion control of **US005816791 (Home)** to include a sensor arranged to detect the presence of a dangerous substance and an electronic type switch arranged to control power to the magnetic operated valve unit in response to a detected signal from sensor, in view of the teaching of **US004638789 (Ueki et al)**. Also, in regard to claims 8, 13 and 14, Official Notice is taken that it is well known to use MOSFET switches as means to selectively control electricity to burner components, using igniter devices of the self powered piezoelectric type, and controlling the delivery of a combustible gas in water heating apparatus with a control unit of the type for providing safe operation and for detecting unsafe conditions. Therefore, in view of that which is well known and for the known purposes, it would have been obvious to a person having ordinary skill in the art to modify **US005816791 (Home)** to include the elements recited in claims 8, 13 and 14.

Conclusion

See the attached PTO FORM 892 for prior art made of record and not relied upon and which are considered pertinent to applicant's disclosure.

USPTO CUSTOMER CONTACT INFORMATION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **CARL D. PRICE** whose telephone number is **(571) 272-4880**. The examiner can normally be reached on **Monday through Friday between 6:30am-3:00pm**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Ehud Gartenberg** can be reached on **(571) 272-4828**. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3749

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Carl D. Price', with a stylized flourish at the end.

CARL D. PRICE

Primary Examiner

Art Unit 3749

Cp